

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Airco Industries Inc dba Photo Etch

Texas Manufacturing Assistance Center

Lean Concepts Light Up Airco's Operations

Client Profile:

Airco Industries, dba Photo Etch, designs and manufactures the industry's most sophisticated integrally lighted displays and control panels for military and commercial airborne and ground communications and navigation systems. In recent years, Photo Etch has expanded its expertise to include flight simulation and training components to worldwide customers.

Airco Industries, Inc. began doing business as Photo Etch in 1960. From a small start-up company with five employees, Photo Etch has grown to be a comprehensive manufacturer of specialized systems with a worldwide reputation for quality and reliability. Based in Fort Worth, Texas, the company now employs more than 50 people.

Situation:

Airco was in the process of divesting itself of an unprofitable division and implementing a new ERP system. The management team had a full plate with these challenges. To top it off, the company also needed to cut operating costs, improve the scheduling process, and shorten lead times. Management at Airco had some familiarity with lean manufacturing concepts and saw some opportunities to improve operations. Airco turned to the Texas Manufacturing Assistance Center (TMAC), a NIST MEP network affiliate, for ERP support and for its expertise in implementing Lean processes. The company knew about TMAC's services through its years of participation in TMAC's Journey to Excellence breakfast workshop series.

Solution:

TMAC scheduled extensive lean training for Airco employees. TMAC provided value stream mapping (VSM) training for 21 team members and later taught introductory lean manufacturing principles with hands-on simulation to 90 percent of the managers and hourly work force.

TMAC and Airco worked together to map the entire business from estimating through engineering, order entry to manufacturing. The value stream map showed that significant opportunity for impact existed in the order-entry and manufacturing processes. TMAC applied proven lean techniques to the front-end office functions. Then it focused on reducing work-in-process (WIP) and evaluating inventory pull systems on the shop floor. TMAC's Principles of Lean Office training was delivered to Airco's office staff with great results.

TMAC met with Airco's management team to determine a swift but sure plan to

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prioritize objectives and to develop a systematic approach to meet Airco's objectives. These planning sessions resulted in the development of a strategy to improve cycle times and reduce costs. The strategy included a lean manufacturing approach combined with defined scheduling and ERP implementation requirements. Four teams--Estimating, Manufacturing Operations, Sales & Order Entry, and Engineering--were commissioned to focus on their areas of the business to support and achieve top-level goals.

The team exceeded targets within the allotted timelines and overall cycle time was cut in half. Randy Fry, CEO, sent a letter to Airco's customers committing to a 50 percent reduction in delivery time. The elimination of one-third of the steps and 65 percent of the time involved within the order-entry process greatly impacted the overall results.

Results:

Reduced delivery time by 50 percent.

Reduced cycle times by 50 percent.

Reduced manufacturing costs by 20 percent.

Improved utilization to gain a 30 percent increase in capacity (without any capital expenditure).

Reduced total inventory by 25 percent with expectations of additional gains.

Testimonial:

"The success of our project with the Texas Manufacturing Assistance Center has helped Airco focus on moving from a good to a GREAT company!"

Randy Fry, Chief Executive Officer